

## ST. LAWRENCE HIGH SCHOOL



## A Jesuit Christian Minority Institution

## WORKSHEET – 35

## **Topic: Binary Subtraction( using 2s complement)**

| Subject: CO | MPUTER SCIENCE  | Class - 11                       |                                   | F.M:15           |  |
|-------------|---|----------------------------------|-----------------------------------|------------------|--|
| Chapter: Da | ta Representation   |                                  |                                   | Date: 25/01/2021 |  |
| <u>Ch</u>   | oose the correct  | t answer for ea                  | ch question:                      | [5 X 1 = 15]     |  |
|             | 1) (10001 – 10) <sub>2</sub> us<br>(a) 1001                           | ing 2's complement<br>(b) 1111   | subtraction gives:<br>(c) – 1011  | (d) 1000         |  |
|             | 2) (1111 – 11001) <sub>2</sub> (a) – 1010                             | (d) 1000                         |                                   |                  |  |
|             | (a) - 1010  | (b) 1111                         | (c) - 1011                        | (4) 1000         |  |
|             | 3) (11000 – 111) <sub>2</sub> us                                      |                                  |                                   |                  |  |
|             | (a) 10001   | (b) 11101                        | (c) 101                           | (d) 10101        |  |
|             |   |                                  | ent subtraction gives:            | (1) 4000         |  |
|             | (a) 1010  | (b) 1111                         | (c) 1011                          | (d) 1000         |  |
|             | 5) (11101 – 101) <sub>2</sub> us<br>(a) 10011                         | sing 2's complement<br>(b) 10111 | t subtraction gives:<br>(c) 11010 | (d) 11000        |  |
|             | 6) (11010 – 101) <sub>2</sub> us<br>(a) 10011                         | sing 2's complement<br>(b) 11110 | t subtraction gives:<br>(c) 10101 | (d) 1000         |  |
|             | 7) (1101 – 10) <sub>2</sub> usin                                      | and section                      |                                   |                  |  |
|             | (a) 1001  | (b) 1111                         | (c) 1011                          | (d) 1000         |  |
|             | 8) (100001 - 11111)   |                                  |                                   |                  |  |
|             | (a) 0010  | (b) 1111                         | (c) 1011                          | (d) 1000         |  |
|             | 9) (10000 – 111) <sub>2</sub> using 2's complement subtraction gives: |                                  |                                   |                  |  |
|             | (a) 1010  | (b) 1001                         | (c) 1011                          | (d) 1000         |  |

| 10) (10001 – 1110) <sub>2</sub> using 2's complement subtraction gives:        |              |              |                   |  |  |  |
|--|--------------|--------------|-------------------|--|--|--|
| (a) 1010   | (b) 0011     | (c) 1011     | (d) 1000          |  |  |  |
|  |              |              |                   |  |  |  |
| 11) $(10101 - 101010)_2$ using 2's complement subtraction gives:               |              |              |                   |  |  |  |
| (a) 0010   | (b) - 10101  | (c) — 1011   | (d) - 1000        |  |  |  |
|  |              |              |                   |  |  |  |
| 12) $(0111 - 1001)_2$ using 2's complement subtraction gives:                  |              |              |                   |  |  |  |
| (a) - 0010   | (b) 1111     | (c) – 1011   | (d) 1000          |  |  |  |
|  |              |              |                   |  |  |  |
| 13) (11001010 - 10011010) <sub>2</sub> using 2's complement subtraction gives: |              |              |                   |  |  |  |
| (a) 01001100   | (b) 00001100 | (c) 00110000 | (d) None of these |  |  |  |
|  |              |              |                   |  |  |  |
| 14) (10010011- 10000111) <sub>2</sub> using 2's complement subtraction gives:  |              |              |                   |  |  |  |
| (a) 01101100 (b) 00001100 (c) – 01001100 (d) None of these                     |              |              |                   |  |  |  |
|  |              |              |                   |  |  |  |
|  |              |              |                   |  |  |  |
|  |              |              |                   |  |  |  |
| 15) (1010 – 10) <sub>2</sub> using 2's complement subtraction gives:           |              |              |                   |  |  |  |
| (a) 1001   | (b) 1011     | (c) 1100     | (d) 1000          |  |  |  |

Phalguni Pramanik